

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application:

1-15. **(Canceled)**

16. **(Currently Amended)** A method for treating a mammal suffering from a ~~localized bacterial infection, a bacterial-related disease, or both~~ periodontal disease, comprising locally administering by injection in the proximity of the periodontal disease a therapeutically effective amount of a composition comprising at least one granulocyte-macrophage-colony stimulating factor (GM-CSF) polypeptide

~~wherein the bacterial infection or bacterial-related disease is selected from periodontal disease or sinusitis.~~

17. **(Canceled)**

18. **(Previously Presented)** The method of claim 16, wherein the periodontal disease is gingivitis or periodontitis.

19-20. **(Canceled)**

21. **(Currently Amended)** The method of claim 16, wherein the composition is ~~suitable for administration via injection~~ administered by injection through the mucosal lining of the ~~gingival~~ gingiva or by application in a periodontal pocket.

22. **(Previously Presented)** The method of claim 16, wherein said GM-CSF is present in the composition in a unit dosage amount of 5 µg to 800 µg.

23. **(Previously Presented)** The method of claim 22, wherein the unit dosage amount is 50 µg to 100 µg.

24. **(Previously Presented)** The method of claim 16, wherein the composition is administered at intervals ranging from once a day to once every third week.

25. **(Previously Presented)** The method of claim 16, wherein the composition is administered a total of 1 to 3 times for a period of one week.

26. **(Previously Presented)** The method of claim 16, wherein the composition comprises a therapeutically effective amount of at least one other active ingredient.

27-31. **(Canceled)**

32. **(New)** The method of claim 16, wherein the composition is administered by injection into the alveolar mucosa.

33. **(New)** The method of claim 16, wherein the composition is administered by injection into the sublingual mucosa.

34. **(New)** The method of claim 16, wherein the composition is administered by injection into the palate part.

35. **(New)** The method of claim 16, wherein the composition is administered by injection between the periosteum of the alveolar bone and the alveolar mucosa, and wherein a needle used for injection is inserted into a flexible oral muscosa region adjacent to the gingiva

36. **(New)** The method of claim 16, wherein the mammal is a human

37. **(New)** A method for inducing tooth calcification in a mammal, comprising locally administering by injection in the proximity of the periodontal disease a therapeutically effective

amount of a composition comprising at least one granulocyte-macrophage-colony stimulating factor (GM-CSF) polypeptide.

38. **(New)** The method of claim 37, wherein said GM-CSF is present in the composition in a unit dosage amount of 5 µg to 800 µg.

39. **(New)** The method of claim 38, wherein the unit dosage amount is 50 µg to 100 µg.

40. **(New)** The method of claim 37, wherein the composition is administered at intervals ranging from once a day to once every third week.

41. **(New)** The method of claim 37, wherein the composition is administered a total of 1 to 3 times for a period of one week.

42. **(New)** The method of claim 37, wherein the composition comprises a therapeutically effective amount of at least one other active ingredient.

43. **(New)** The method of claim 37, wherein the composition is administered by injection through the mucosal lining of the gingiva or by application in a periodontal pocket.

44. **(New)** The method of claim 37, wherein the composition is administered by injection into the alveolar mucosa.

45. **(New)** The method of claim 37, wherein the composition is administered by injection into the sublingual mucosa.

46. **(New)** The method of claim 37, wherein the composition is administered by injection into the palate part.

47. **(New)** The method of claim 37, wherein the composition is administered by injection between the periosteum of the alveolar bone and the alveolar mucosa, and wherein a needle used for injection is inserted into a flexible oral muscosa region adjacent to the gingiva.
48. **(New)** The method of claim 37, wherein the mammal is a human.